ABSTRACT OF THE DISCLOSURE

A chlorinated azetidinone derivative expressed by Formula (1) and an alcoholate are allowed to react in a solvent containing at least one of alcohols and an ether at a pH of 8 or less. Thus a 3-chloromethyl-3-cephem derivative expressed by formula (2) is prepared. In the formulas, R_1 represents a substituted or unsubstituted aryl group or a substituted or unsubstituted heterocyclic residue, and R_2 and R_3 each represent a substituted or unsubstituted aromatic hydrocarbon group.